

FORRESTER KETLEY & CO

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Our ref

I17499WO
LDH/APH/lhw

Your ref

Date

08 July 2005

Dear Sirs

Re: International PCT Application No PCT/GB04/003908
Minebea Co Ltd
Our Ref: I17499WO

We refer to the Written Opinion of the International Searching Authority issued in connection with the International Search Report with the communication dated 3 January 2005. In response to the Written Opinion, we herewith submit the following comments.

Claim 1 of the present application recites:

'A self-lubricating bearing for use in low pressure, high frequency, small amplitude applications, the bearing having a self-lubricating liner and a counterface surface in close sliding contact therewith, the counterface surface having a surface finish of less than 20nm and a hardness of less than in the region of 1000VPN.'

In the Written Opinion, the examiner states that Claim 1 does not possess the required inventive step in the light of a combination of the disclosures of documents D1 and D2.

Turning to document D1, a bearing is disclosed as having two bearing members (1,3), both of which are composed of titanium or titanium alloy. One of the bearing members (1) is chromium plated, whilst the other bearing member (3) is coated with both nickel and fluorocarbon polymer. The nickel and fluorocarbon polymer coating is then heat treated to create a 'smooth surface'. The document further discloses that the coating has a hardness in the range of "750 to 1000VPN". Further, the passage from lines 30-32 of column 1 of document D1 discloses that the fluorocarbon polymer provides "permanent lubrication". It would appear that the examiner thinks that the fluorocarbon polymer -

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coated surface corresponds to the 'counterface surface' of the claimed invention. This is not the case.

In document D1 - assuming that the flourocarbon polymer constitutes a 'self-lubricating' liner according to the present invention - the counterface surface in "*close sliding contact*" with the "*self lubricating liner*" does not possess the features required by claim 1. Instead, the counterface surface of D1 is, in fact, the untreated/uncoated, chromium plated bearing member 1, which bearing member is not disclosed as having a "*surface finish of less than 20nm and a hardness of less than in the region of 1000VPN*". Moreover, the document does not disclose the chromium plated bearing member as having any sort of surface finish or hardness. Accordingly, we respectfully submit that document D1 is not of relevance to a consideration of the inventive step of the claimed invention.

Notwithstanding our comments made above, we note that the examiner hypothesises that the alleged disclosure of a surface finish of less than 20nm in document D2 would be used to construe the term 'smooth surface' in D1 and thereby arrive at the features of claim 1. Document D2, however, which is acknowledged in the preamble of the present application, specifically teaches away from a hardness of less than 1000VPN. The skilled person would not be offered any incentive to construe the term "smooth surface" in D1 as being equal to the surface finish of 10-50nm disclosed in D2, because D1 discloses a hardness of 750-1000VPN - qualities that D2 teaches away from. In any event, even if a skilled person were to combine the disclosures of the two documents, then the resultant bearing would still not possess the features of claim 1.

Documents D3 to D5 do not disclose the features of Claim 1, nor would their combination with any other cited document arrive at the features of claim 1.

Our comments hereinbefore submitted apply equally, *mutatis mutandis*, to Claims 9 and 11 and therefore we respectfully submit that the Claims of the above captioned international application as originally filed possess both novelty and inventive step over the cited prior art.

Yours faithfully

FORRESTER KETLEY & CO